CHAPTER 12 ENVIRONMENTAL PERMITTING AND ROW COSTS

12.1 INTRODUCTION

Environmental permitting and right-of-way acquisition cost estimates were developed on the Preferred Route after the siting study was completed. This section presents costs for environmental studies, permitting and right-of-way acquisition of the Townsend to Borah 500kV line option based on the Preferred Route detailed in Chapter 5.

12.2 ASSUMPTIONS

The following assumptions where used for the development of environmental, permitting and right-of-way costs:

- Northern terminus of the transmission line is the Townsend Substation Site, Montana
- Southern terminus of the transmission line is the existing Borah Substation west of Pocatello, Idaho.
- Right of Way width for the 500kV steel lattice transmission line is 220 feet.
- Preferred Route Length: *301.4 miles*
- Townsend Substation site is 40 acres. The land cover is Irrigated/Planted/Cultivated. Ownership is Private.
- Land Jurisdiction:
    - 36.6% of ROW is Bureau of Land Management (Federal)
    - 3.7% of ROW is Forest Service (Federal)
    - 12.8% of ROW is Idaho National Laboratory (Federal)
    - 4.8% of ROW is State land (Montana and Idaho)
    - 42.1% of ROW is Private
    - 110.4 miles and 2944 acres of ROW is BLM (Federal)
    - 11.1 miles and 296 acres of ROW is Forest Service (Federal)
    - 38.5 miles and 1,026.7 acres of ROW is Idaho National Laboratory (Federal)
    - 14.5 miles and 386.7 acres of ROW is State land (Montana and Idaho)
    - 126.8 miles and 3,381.3 acres of ROW is Private
- The 301.4 mile line runs through 10 Counties:

    Montana

    - Beaverhead - 82.1 miles
    - Broadwater - 18.9 miles

o Butte	- 38.0 miles
o Madison	- 25.6 miles
o Silverbow	- 1.8 miles
o Jefferson	- 42.4 miles
Total Montana	**- 208.8 miles**

Idaho

o Bingham	- 40.5 miles
o Clark	- 41.2 miles
o Power	- 8.4 miles
o Jefferson	- 2.5 miles
Total Idaho	**- 92.6 miles**

12.2.1 Environmental Studies Assumptions

- Assume a Siting Study is prepared valued at $ 251,000.
- Assume a Montana Major Facilities Siting Act (MFSA) Application/ Environmental Report prepared valued at $ 1,000,000.
- MFSA Filing Fee based on % of estimated cost of facility per a scale set forth in MCA 75-20-215. Facility cost based only on 208.8 miles of 500kV transmission line in Montana and cost of new Townsend substation in Montana. Idaho portion of the transmission line and Borah substation improvements not included in the facility cost basis.

Montana portion of 500 kV line:	$ 205,974,465
Townsend Substation (New)	57,353,900
Total Cost of Montana Facilities	*$ 263,328,365*

  - ➢ Filing fee is 0.125% of any estimated cost over $100 million and up to $500 million
    - ❖ MFSA Filing Fee: $263,328,365 x 0.125% = $329,160
- Assume a joint MEPA/NEPA EIS is required for the project and is valued at $ 1,500,000.
- Assume cost reimbursement for DEQ and BLM during MEPA/NEPA processing $ 600,000.

- Assume BLM and Forest Service monitoring fee to monitor right-of-way during construction for compliance with right-of-way terms and conditions is estimated at $150,000.

- Assumes cultural resources studies done at $75/acre with the following assumptions:

    - Record searches and background research will be performed only in Boise, Helena, and Missoula.
    - Surface survey will be performed by a team of archaeologists using 30-meter transect intervals.
    - Subsurface survey (e.g., shovel test pits [STP], auger holes) will be performed in limited areas and will average no more than 1 STP or auger hole per 10 acres.
    - Survey will be non-collection.
    - There will be an average of 4 archaeological sites and an average of 2 historic buildings or structures (e.g., irrigation ditches, adits, fencelines) per 100 acres.
    - Isolated finds will be noted but not recorded.
    - National Register evaluations will be based on the results of surface and subsurface survey and will not be based on test excavations or detailed architectural (HABS/HAER) documentation.
    - Native American consultation will be performed by agencies with limited support from POWER Engineers.
    - Native American sacred sites will be identified only through the Section 106 consultation process performed by agencies.
    - No human skeletal remains will be discovered.
    - The proposed corridors will avoid National Historic Landmarks, National Register districts, historic neighborhoods, or areas that were mined extensively during the historic period.
    - Mitigation costs (e.g., data recovery, architectural documentation, relocation, monitoring) are not included in the cost estimate.

- Assumes biological resource studies and surveys done at $125/acre. The following biological resource studies and surveys are included in the per acre cost estimate:

    - Wetland Surveys
    - Plant Surveys and Vegetative Community Mapping
    - General Wildlife Surveys
    - Sage Grouse Lek Surveys
    - Bat Roost/Hibernacula Surveys

  The surveys consist of labor, expenses, report preparation and GIS mapping. No GPS expenses are assumed.

- Assumes other resource studies (e.g. land use/visual) done at $100/acre.

Permits

- Permits include:
  - BLM Grant of Right of Way
  - Forest Service Special Use
  - Permit FAA Notice of Proposed Construction
  - U. S. Army Corps of Engineers Nationwide Permit 12 (Utility Line Activities) and Nationwide Permit 33 (Temporary Construction and Access)
  - State of Montana, Board of Environmental Review Certificate of Compatibility
  - Montana DEQ- Section 401 Water Quality Certification
  - General Discharge Permit for Storm Water Associated with Construction Activity
  - Joint Application for 318 Water Quality Permit
  - Montana Floodplain Development Permit
  - Montana DNRC- Easement/Land Use License for use of State lands
  - Idaho Department of Lands for Easements Montana
  - Idaho Department of Transportation- Utility Crossing Permit
  - County Use Permits
  - Railroad Crossing Permits

12.2.2 Right-of-Way (ROW) Assumptions

- Total Acres in 220 foot wide ROW = 8,035 acres
- BLM and Forest Service Right-of-Way Rent. BLM and Forest Service calculate rent for a linear right-of-way by multiplying the rent per acre and the county zone price from the current rental schedule (in 43 CFR 2803.1-2) by the number of acres in the right of way and the number of years in the rental period.
  - Rent Per Acre from CY 2006 Linear Right of Way Schedule (County Zone Price) is $7.01/acre/year.
  - Assume 4,266.7 acres of Federal right-of way. (BLM, Forest Service and Idaho National Laboratory).
  - Assume 30 year right-of-way grant and rental period. (rent per acre x number of acres x number of years in the rental period = rent for Federal ROW) ($7.01/acre/year x 4,266.7 acres x 30 years = $ 897,287.01).

- Private and State Land ROW

    - Private and State land ROW is assumed to be fair market value of land based on a per acre value of the land type:

Land Type	*Estimated Market Value per Acre*	*Private (Acres) Cost*	*State Land (Acres) Cost*
Shrubland/Dry Grazing	$3,500	1053.3 $3,686,550	128.3 $449,050
Grassland/Herbaceous Upland	$3,500	1734.6 $6,071,100	254.4 $890,400
Irrigated Agriculture/Planted Cultivated	$5,000	477.5 $2,387,500	0.1 $500
Total	***N/A***	***$12,145,150***	***$1,339,950***

- Private ROW assumes negotiation, land valuation, title and easement acquisition costs = $3,000 per land owner. ROW assumes 1.5 landowners per mile average within lands identified in private ownership:

    - 126.8 miles divided by 1.5 = 85 landowners.

12.3 Environmental Studies and Permitting Costs

This section includes costs associated with routing and preliminary engineering, Montana Major Facilities Siting (MFSA) Application studies and fees, Environmental Impact Statement, and associated studies and surveys.

	Acres	$/acre	Cost
Routing Study			$ 251,000
MFSA Application/Environmental Report			$ 1,000,000
MFSA Filing Fee			$ 329,160
NEPA/MEPA EIS			$ 1,500,000
Cost Reimbursement for DEQ & BLM MEPA/NEPA Process			$ 600,000
Federal Monitoring Fee During Construction			$ 150,000
Cultural Resource Studies	8,035	75	$ 602,625
Biological Resource Surveys/Studies	8,035	125	$ 1,004,375
Other Studies	8,035	100	$ 803,500
Mitigation Costs			$ 1,000,000
Permit Costs			$ 500,000
Total Environmental and Permitting			**$ 7,740,660**
Environmental and Permitting Cost per Mile			***$ 25,682***

12.4 Right-of-Way Costs

This section includes costs associated with right-of-way procurement on federal, state and private lands.

	Cost
Federal Right of Way Rent (30 years)	$ 897,287
Private Land ROW	$12,145,150
Townsend Substation Site Purchase	$ 125,000
Private ROW Negotiation, Land Valuation, Title and Easement Acquisition Cost at $3,000 per owner x 85 private landowners	$ 255,000
State Land ROW	$ 1,339,950
Total ROW	**$14,762,387**
ROW Cost Per Mile	***$ 48,979***

12.5 Total Project Cost

12.5.1 Townsend-Borah 500kV Project

Total costs of the Preferred 500kV Townsend to Borah transmission line based on the engineering assumptions, anticipated environmental studies, permitting and right-of-way/property acquisition is as follows:

Borah Substation Upgrades:	$11,090,000
New Townsend Substation:	$62,378,000
Compensation Station:	$22,273,000
Transmission Line:	$418,934,000
Environmental and Permitting:	$ 7,740,660
Right-of-Way:	$ 14,762,387
Total Cost:	**$537,179,000**
Cost per mile:	***$1,778,700***

12.5.2 Townsend-Borah 345kV Project

Total costs of the alternative 345kV Townsend to Borah transmission line based on the engineering assumptions, anticipated environmental studies, permitting and right-of-way/property acquisition is as follows:

Borah Substation Upgrades:	$7,397,000
New Townsend Substation:	$64,324,000
Compensation Station:	$15,685,000
Transmission Line:	$290,673,000
Environmental and Permitting:	$ 7,740,660
Right-of-Way:	$ 14,762,387
Total Cost:	**$400,583,000**
Cost per mile:	***$1,326,400***